

Montana Department of Natural Resources and Conservation Water Resources Division Water Rights Bureau
<b>ENVIRONMENTAL ASSESSMENT</b> <b>For Routine Actions with Limited Environmental Impact</b>

**Part I. Proposed Action Description**

1. Applicant/Contact name and address:

Applicant:

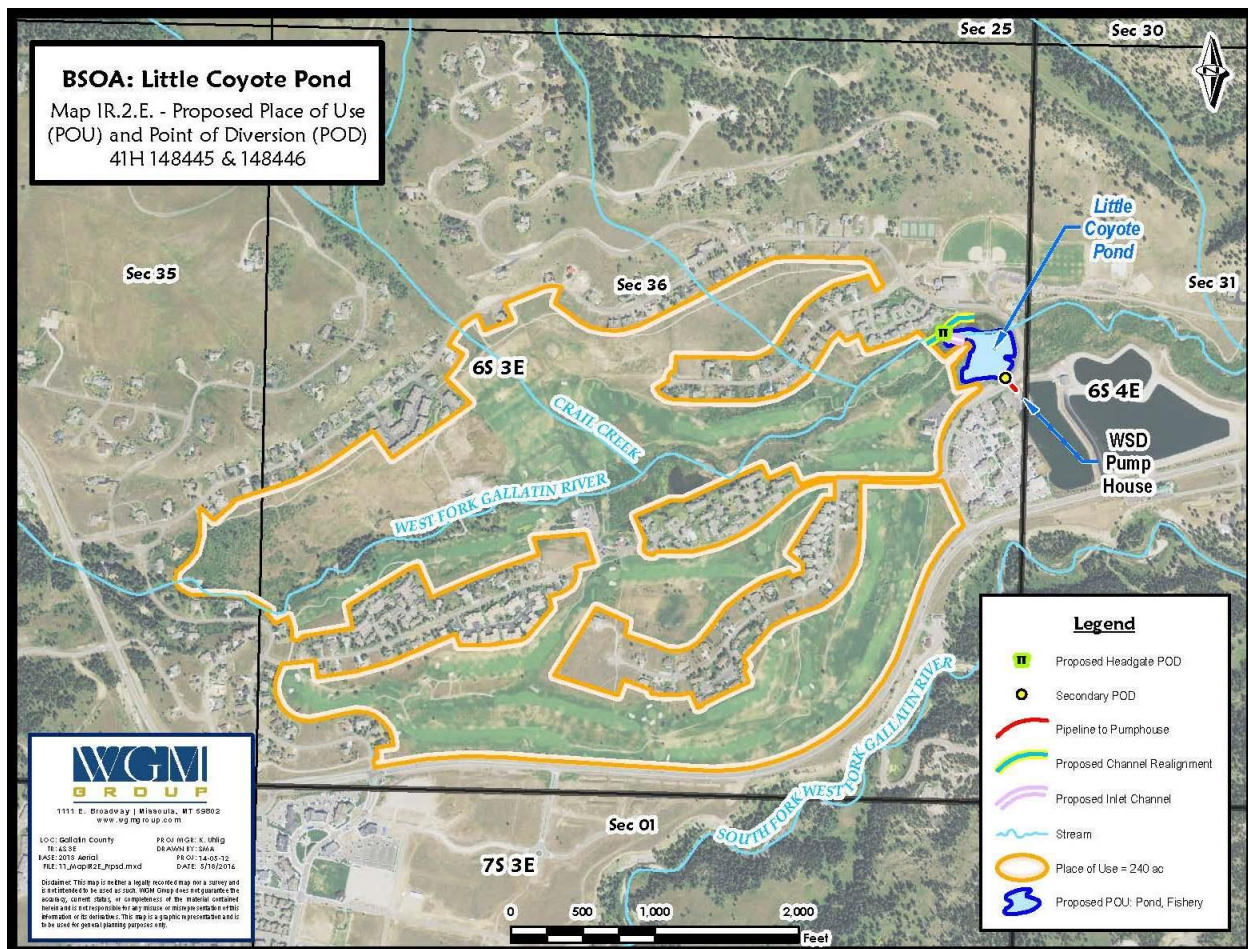
Big Sky County Water & Sewer Dist #363  
Ron Edwards  
P.O. Box 160670  
Big Sky, MT 59716-0670

Consultant:

Karl Uhlig  
WGM Group Inc.  
1111 E Broadway St  
Missoula, MT 59802

2. Type of action: Application to Change an Existing Irrigation Water Right No. 41H 30104096.
3. Water source name: West Fork of the West Gallatin River.
4. Location affected by project:

Section 25, T06 S, R02 E, Gallatin County  
Sections 19, 20, 25, 26, 28, 29, 30, 33, 34, 35, 36; T06 S, R03 E, Gallatin County  
Section 31, T06 S, R04 E, Gallatin County  
Sections 1, 2, 3, 4, 5; T07 S, R03 E, Gallatin County



**Figure 1:** Map of location affected by project. Application materials IR.2.E.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The applicant proposes to change the purpose, place of use, point of diversion, and place of storage for Statements of Claim Nos. 41H 148445-00 and 41H 148446-00.

In the application as originally submitted, the applicant proposed to change the point of diversion and the place of storage for both water rights. As part of a stream restoration project, the applicant and other involved parties are rerouting and reconstructing a reach of the West Fork of the West Gallatin River around Little Coyote Pond. The pond is currently an on-stream reservoir. After the restoration work, the reservoir will be off-stream. The new point of diversion will be a headgate with a ditch to convey water to the off-stream pond and will be located within the same 10-acre legal land description as the historical point of diversion.

The footprint of the pond will change slightly; both the capacity and the surface area will be reduced, with the volumes of water that will no longer be stored and will no longer be lost to evaporation salvaged and dedicated to a fishery purpose. This volume will be permanently changed to a fishery purpose and protected along the new inlet channel and diversion works.

In a February 13, 2017, amendment, the applicant proposed to change partially the purpose of these two water rights from irrigation to municipal. For the portion to be changed to municipal, the new place of use is proposed as the service area outlined by the Montana Department of Environmental Quality for the Big Sky County Water and Sewer District #363.

For the remaining 60 acres of the historical place of use, the applicant proposes to dedicate the associated volume to instream flow to benefit the fishery resource of the West Fork of the West Gallatin River. The applicant has proposed a temporary change to instream flow for a period of five years.

The Department shall issue a change authorization if the applicant proves the criteria in §85-2-402, MCA, are met.

6. Agencies consulted during preparation of the Environmental Assessment:
- Montana Department of Fish, Wildlife & Parks (FWP) – Montana Fisheries Information System (MFISH)
    - <http://fwp.mt.gov/fishing/mFish>
  - Montana Department of Environmental Quality (DEQ) – Clean Water Act Information Center (CWAIC)
    - <http://deq.mt.gov/wqinfo/CWAIC/default.mcp>
  - Montana National Heritage Program (MTNHP) – Species of Concern:
    - <http://mtnhp.org/SpeciesOfConcern>
  - U.S. Fish & Wildlife Service (USFWS) – National Wetlands Inventory Wetlands Mapper
    - <http://www.fws.gov/wetlands/Data/Mapper.html>
  - Natural Resource Conservation Service (NRCS) – Web Soil Survey (WSS)
    - <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
  - Montana Bureau of Mines and Geology (MBMG) – Ground Water Information Center (GWIC)
    - <http://mbmggwic.mtech.edu>

## **Part II. Environmental Review**

### **1. Environmental Impact Checklist:**

<b>PHYSICAL ENVIRONMENT</b>
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#### **WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by FWP. Assess whether the proposed use will worsen the already dewatered condition.

*Determination:* No significant impact identified.

According to a December 30, 2016, search of MFISH, FWP does not list the West Fork of the West Gallatin River as chronically or periodically dewatered. This change would improve water

quantity conditions in the West Fork and the West Gallatin Rivers, as water that was previously impounded or lost to evaporation would now be protected for a fishery purpose. Additionally, 42.38 AF consumed/52.97 AF diverted of water would be changed temporarily to an instream purpose to benefit the fishery resource. More water will be left in the West Fork as compared to historical conditions.

**Water quality** - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

*Determination:* No significant impact identified.

According to a December 30, 2016, search of the CWAIC website, DEQ lists the West Fork as fully supporting drinking water and agricultural uses. DEQ lists the West Fork as not fully supporting primary contact recreation or aquatic life. Identified impairments include chlorophyll-a, due to site clearance and on-site treatment (e.g., septic) systems; nitrate-nitrite, due to site clearance and on-site treatment systems; total nitrogen, due to site clearance and on-site treatment systems; total phosphorous, due to site clearance and on-site treatment systems; and sedimentation-siltation, due to site clearance and silviculture activities.

Water that was previously impounded, lost to evaporation, or consumed by crop irrigation will now be left instream, so the increased volume of water will help dilute pollutants and improve water quality. Mike Vaughn, a retired fisheries biologist with FWP, submitted a letter of support for this project, indicating that the proposed project would remove a source of solar-heated water and excess nutrients from the West Fork, which would improve water quality and benefit aquatic life.

**Groundwater** - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

*Determination:* No significant impact identified.

The rights being changed are from surface water. Portions of these rights will be dedicated to a permanent fishery purpose and a temporary instream flow purpose. Under these new purposes, water will be left instream and may interact with hydraulically connected groundwater. Of the remaining amount, only the historically consumed portion will be changed to a new municipal purpose. These changes should not significantly impact groundwater quality or quantity.

**DIVERSION WORKS** - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

*Determination:* No significant impact identified.

This project would change Little Coyote Pond to an off-stream reservoir and improve the diversion works, allowing greater control and more accurate operation when diverting water into the reservoir. The existing West Fork channel is impounded by the reservoir and would be returned to a more natural state under this proposal. Mike Vaughn, a retired fisheries biologist with FWP, submitted a letter of support for this project, indicating that the proposed project

would benefit the West Fork and West Gallatin Rivers and that an on-stream reservoir would not be permitted today. The improvement of the diversion works will benefit the West Fork and West Gallatin Rivers.

#### **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

***Endangered and threatened species*** - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern,” or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”

*Determination:* No significant impact identified.

A December 30, 2016, query of the Montana National Heritage Program’s website produced the following results:

##### **Animal Species**

- Five (5) Species of Concern: Wolverine, Grizzly Bear, Veery Thrush, Brown Creeper, Clark’s Nutcracker.
- Zero (0) Potential Species of Concern.
- Zero (0) Special Status Species.

##### **Plant Species**

- One (1) Species of Concern: Whitebark Pine.
- Zero (0) Potential Species of Concern.
- Zero (0) Special Status Species.

The proposed project would improve the operation of the diversion works, move an on-stream reservoir off-stream, and leave additional water instream, all of which would benefit the ecosystem and any endangered or threatened species.

***Wetlands*** - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

*Determination:* No significant impact identified.

A December 30, 2016, search of the USFWS Wetlands Mapper identified some freshwater emergent wetlands and freshwater forested/shrub wetlands near both Little Coyote Pond and the irrigation place of use. Little Coyote Pond and the Big Sky Meadow and golf course are already heavily anthropogenically influenced. The applicant intends to continue irrigating the golf course. The proposal to move Little Coyote Pond off-stream, improve its diversion works, and reduce the capacity and surface area should not significantly affect the nearby wetlands. As discussed elsewhere in this document and as explained in former FWP fisheries biologist Mike Vaughn’s letter of support, the proposed project will return this area to a more natural state. The applicant has also indicated to the Department that they are in the process of applying for or will apply for all the necessary permits to perform this work. The changes proposed in this project should not significantly affect the wetlands.

**Ponds** - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

*Determination:* No significant impact identified.

The applicant proposes to move an existing on-stream pond off-stream and reduce slightly its capacity and footprint. Mike Vaughn, a retired fisheries biologist with FWP, submitted a letter of support for this project, indicating that the proposed project would remove a source of solar-heated water and excess nutrients from the West Fork, which would improve water quality and benefit wildlife.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination:* No significant impact identified.

The applicant intends to continue irrigating the golf course place of use. The continued irrigation of the project area will not significantly change geological/soil conditions as compared to present conditions. Moving the reservoir off-stream and improving its diversion works should not significantly affect soil quality, stability, or moisture content. The applicant has also indicated to the Department that they are in the process of applying for or will apply for all the necessary permits to perform this work. A December 30, 2016, search of the NRCS WSS site did not identify any saline seeps in the area.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

*Determination:* No significant impact identified.

The applicant intends to continue irrigating the golf course place of use, so continued irrigation of the project area should not significantly change vegetative cover conditions as compared to present conditions. Moving the reservoir off-stream may help riparian vegetation by removing a source of solar heat and excess nutrients, conditions which are detrimental to cold-water vegetation.

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

*Determination:* No impact identified.

This project will not impact air quality.

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination:* Not applicable.

The project is not located on State or Federal Lands. Furthermore, the applicant made no mention of significant historical or archeological sites on the property.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination:* No impact identified.

No other demands on environmental resources of land, water, and energy have been identified.

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

*Determination:* No significant impact identified.

The applicant's goals are to continue using water they have historically used and to obtain flexibility under a new municipal purpose. Furthermore, their goals are to replace the diversion works and improve their operation and to move the reservoir off-stream in order to improve the ecological health of the West Fork, while protecting water instream for fishery and instream flow purposes.

Municipal use of water is consistent with local and statewide goals, and given the existing demands, the current use of water, and the contemplated growth, the changes proposed are reasonable.

Operating the reservoir in a more effective and environmentally conscious manner, while continuing to meet the needs for which the reservoir was constructed, are consistent with local and statewide goals.

Lastly, leaving additional water instream and protecting it for fishery and instream flow purposes are consistent with local and statewide goals.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

*Determination:* No impact identified.



This project is located on private property within the resort community of Big Sky, Montana, and will not affect access to recreational activities or the quality of recreational and wilderness activities.

**HUMAN HEALTH** - *Assess whether the proposed project impacts on human health.*

*Determination:* No impact identified.

None of the sub-purposes contemplated by the applicant under the municipal umbrella includes human consumption of the West Fork water. Improving the diversion works, changing Little Coyote Pond to an off-stream pond, and leaving additional water instream will not impact human health.

**PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights.*

Yes\_\_\_ No X *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

*Determination:* No impact identified.

The project does not impact government regulations on private property rights.

**OTHER HUMAN ENVIRONMENTAL ISSUES** - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

*Impacts on:*

- (a) Cultural uniqueness and diversity? No impacts identified.
- (b) Local and state tax base and tax revenues? No significant impacts identified.
- (c) Existing land uses? No significant impacts identified.
- (d) Quantity and distribution of employment? No impacts identified.
- (e) Distribution and density of population and housing? No significant impacts identified.
- (f) Demands for government services? No significant impacts identified.
- (g) Industrial and commercial activity? No impacts identified.
- (h) Utilities? No impacts identified.
- (i) Transportation? No impacts identified.
- (j) Safety? No impacts identified.
- (k) Other appropriate social and economic circumstances? No impacts identified.



2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: No secondary impacts have been identified.

Cumulative Impacts: No cumulative impacts have been identified.

3. ***Describe any mitigation/stipulation measures:*** No mitigation or stipulation measures are anticipated at this time.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No reasonable alternatives have been identified to accomplish the applicant's goals of moving Little Coyote Pond off-stream and replacing and improving its diversion works. The reservoir is currently on-stream.

For their goal of continuing irrigation, there are no incorporated municipalities nearby from which the applicant could purchase water. In fact, the applicant is a county water and sewer district and supplies public water to many area developments. They may be able to land-apply effluent to the golf course, a relatively common practice.

The no-action alternative would be not to irrigate the place of use or to xeriscape it. While not applying water to developed or paved areas may be feasible, this no-action alternative may not be realistic for a golf course.

***PART III. Conclusion***

1. ***Preferred Alternative:*** The preferred alternative is to grant the change application if the applicant can prove that the criteria in §85-2-402, MCA, are met.

2 ***Comments and Responses:*** None.

4. ***Finding:***

Yes\_\_\_ No X Based on the significance criteria evaluated in this EA, is an EIS required?

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:* The EA is the appropriate level of analysis because the proposed project is to move an on-stream reservoir off-stream, improve the diversion works, and protect quantities of water for fisheries and instream flow purposes under existing water rights. None of the identified impacts for any of the alternatives is significant as defined in ARM 36.2.524. No significant adverse effects are anticipated.

*Name of person(s) responsible for preparation of EA:*

*Name:* Brent Zundel

*Title:* Hydrologist/Water Resource Specialist

*Date:* June 28, 2017